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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/628,477	07/29/2003	Takahiro Aoki	1614.1351	4692
21171	7590	07/09/2008		
STAAS & HALSEY LLP SUITE 700 1201 NEW YORK AVENUE, N.W. WASHINGTON, DC 20005			EXAMINER LIEW, ALEX KOK SOON	
			ART UNIT 2624	PAPER NUMBER
			NOTIFICATION DATE 07/09/2008	DELIVERY MODE ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

### Office Action Summary

**Application No.**

10/628,477

**Applicant(s)**

AOKI ET AL.

**Examiner**

ALEX LIEW

**Art Unit**

2624

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 24 March 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SF/ICE)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

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The amendment filed on 3/24/08 is entered and made of record.

### **Response to Applicant's Arguments**

On page 5, the applicant stated:

In view of the above described differences, Applicants submit that Mack et al. fails to disclose "a first image pickup... of an object positioned in front of a background using wavelengths in a visible light region; [and] a second image pickup... of the object positioned in front of the background using wavelengths in an infrared region" as recited on lines 2-5 of claim 1.

The examiner agrees; however, in a new search Smoot (US pat no 5,940,139)

discloses an image extraction method, comprising:

a first image pickup step to pick up an image of an object positioned in front of a background using wavelengths in a visible light region (see column 2, lines 50-52);

a second image pickup step to pick up an image of the object positioned in front of the background using wavelengths in an infrared region (see column 2, lines 53-55);  
and

an extracting step to extracting step to extract only the object based on the images picked up by the first and second image pickup steps (see column 3, lines 13-26).

Smoot does not disclose a surface of the background is formed by an organic dye.

O'Meara discloses infrared radiation to detect the plurality of sections in the image by coating the regions using different levels of magnetic material coating, shown in column 4 lines 62-75. The different level of coating give a plurality of reflected light, which distinguish the different regions of image, background area 14 (background area),

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information area 16 (is also read as the background ground area) and character area 18 (object area), where the coated areas includes ink or dye, shown in column 3 lines 26 to 28.

One skilled in the art would include a surface of the background is formed by a dye or any form of dye is because organic dye provides increase in brightness and shading which further distinguish between the object and background in an image (see Rohr US pub no 2002/0098435, paragraph 53).

### **DETAILED ACTION**

#### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1 – 4 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Smoot (US pat no 5,940,139) in view of O'Meara (US pat no 3,544,771) and Rohr et al. (US pub no 2002/0098435).

With regards to claim 1, Smoot discloses an image extraction method, comprising:

a first image pickup step to pick up an image of an object positioned in front of a background using wavelengths in a visible light region (see column 2, lines 50-52);

a second image pickup step to pick up an image of the object positioned in front of the background using wavelengths in an infrared region (see column 2, lines 53-55); and

an extracting step to extracting step to extract only the object based on the images picked up by the first and second image pickup steps (see column 3, lines 13-26).

Smoot does not disclose a surface of the background is formed by an organic dye. O'Meara discloses infrared radiation to detect the plurality of sections in the image by coating the regions using different levels of magnetic material coating, shown in column 4 lines 62-75. The different level of coating give a plurality of reflected light, which distinguish the different regions of image, background area 14 (background area), information area 16 (is also read as the background ground area) and character area 18 (object area), where the coated areas includes ink or dye, shown in column 3 lines 26 to 28.

One skilled in the art would include a surface of the background is formed by a dye or any form of dye is because organic dye provides increase in brightness and shading which further distinguish between the object and background in an image (see Rohr US pub no 2002/0098435, paragraph 53).

With regards to claim 2, Smoot discloses extracting step extracts the object from the image picked up by the first image pickup step depending on color, and extracts the

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object from the image picked up by the second image pickup step depending on luminance (see column 7, lines 20-23, the color of the object is inherently extracted).

With regards to claim 3, Smoot discloses all of the claim elements / features as discussed above in rejection for claim 1 and incorporated herein by reference, but fails to disclose dye has a color selected from a group consisting of blue-green color, gold color and silver color. O'Meara suggests selecting the background color as gray and the color of the object as black. Selecting dye color from group of consisting of blue-green color, gold color and silver color is a matter of choice. It would have been obvious to one having ordinary skill in the art at the time of the invention was made to include Selecting dye color from group of consisting of blue-green color, gold color and silver color is a matter of choice because the energy in the form of electromagnetic radiation such as light is direct to the background dye and object will produce distinguishable series of pulse signal showing the location of object and the background area, so one would be able to easily locate the object.

With regards to claim 4, Rohr discloses organic dye has a color of phthalocyanine organic dye (see paragraph 22). One skilled in the art would include because to allow the dye to with stand light radiation to prevent the dye from coming off from the background image, so the dye in the background can last longer.

With regards to claim 10, see the rationale for claim 1.

3. Claims 5 – 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Smoot ('139) in view of O'Meara ('771), Rohr et al. ('435) and Okazaki (US pat no 6,873,713).

With regards to claim 5, see the rationale and rejection for claim 1. In addition, Okazaki discloses a matching section to compare the image extracted by the extracting section and registered object images and to output a result of comparison as an authentication result (see column 3, lines 19 to 33, a plurality of images are taken from different views, the first image taken is read as the image taken from first imager and second image taken is read as the image taken from second imager, the average brightness is compared between the first, second and to the registered image). It would have been obvious to one having ordinary skill in the art at the time of the invention was made to include a matching section because to identify the individual to prevent trespassers from entering any secure facility to improve security.

With regards to claim 6, see the rationale and rejection for claim 2.

With regards to claim 7, see the rationale for claim 5.

With regards to claim 8, see the rationale and rejection for claim 3.

With regards to claim 9, see the rationale for claim 4.

### **Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ALEX LIEW whose telephone number is (571)272-8623. The examiner can normally be reached on 9:30AM - 7:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Bella can be reached on (571) 272-7778. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Matthew C Bella/  
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7/1/08



